Abstract of the Disclosure

A technique for generating carrier frequencies with fast hopping capability associated with multiband systems for ultra wideband applications. The technique employs a single VCO 20 that is locked in a PLL 30. The output of this VCO 20 is divided in the frequency domain. The divided frequencies thus obtained are combined in a single-sideband manner to obtain various other frequencies. The single-sideband combination requires open loop operations such as multiplication and addition or subtraction to implement, and hence is very fast. The VCO center frequency is not disturbed in the process. Since the required frequencies are generated in an open-loop fashion, instead of inside a PLL, the speed is increased by orders of magnitude.